VARYTEC

Manual

Reactor R5

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1. Safety instructions

- This device is suitable for indoor use (not outdoors) only.
- All modifications to the device will void the warranty.
- Repairs are to carry out by skilled personnel only.
- Use only fuses of the same type and original parts as spare parts.
- Protect the unit from rain and humidity to avoid fire and electric shocks.
- Make sure to unplug the power supply before opening the housing.

1.1. For safe and efficient operation

Be careful with heat and extreme temperature!

Avoid exposing it to direct rays of the sun or near a heating appliance.
Not put it in a temperature bellow 32°F /0°C, or exceeding 104°F /40°C.

Keep away from humidity, water and dust!
Do not place the set in a location with high humidity or lots of dust. Containers with water should not be placed on the set.

To avoid placing on un-stable location!
Select a level and stable location to avoid vibration.

Do not use chemicals or volatile liquids for cleaning!
Use a clean dry cloth to wipe off the dust, or a wet soft cloth for stubborn dirt.

If out of work, contact sales agency immediately!
Any troubles arose, remove the power plug soon, and contact with an engineer for repairing, do not open the cabinet by yourself, it might result a danger of electric shock.

Take care with the power cable!
Never pull the power cable to remove the plug from the receptacle, be sure to hold the plug. When not using the device for an extended period of time, be sure to disconnect the plug from the receptacle.

IMPORTANT!

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems. Make sure the electrical connection is carried out by qualified personnel. All electrical and mechanical connections have to be carried out according to the European safety standards.

2. Designated use

This device was developed for professional use on stages, in discos, theatres etc. The device is only approved for a connection up to 230V 50/60 Hz AC voltage and only for indoor use.

Regular breaks during operation increase the lifetime of your device.

Avoid convulsions or any form of forceful impact during the installation or the start-up of the device.

Make sure that the device is not exposed excessive heat, humidity or dust at the place of installation. Take care that no cables are lying around. You would endanger your own safety and also the safety of a third party.

It is not allowed to operate or store the device in an environment in which spray water, rain, humidity or fog is expected. Humidity or very high atmospheric humidity could reduce the isolation of the device and could cause deathly electric shocks. If you use fog devices the device has not be exposed to a direct smoke jet. There has to be a safety distance of at least 0,5m between this device and the fog machine. Make sure that the saturation of the fog has to enable a visibility of at least 10m.

Operate the device not during thunderstorms. Surge voltages could destroy the device. Unplug the power supply during thunderstorms.

Surrounding objects or surfaces should not be in contact with the device.

Make sure that during the installation and removal of the device the area below the place of installation is basically cordoned off. This also applies to implementation of service.

The device has basically been protected by a suitable safety.

Make familiar yourself with the functions of the device before start-up. People without the experience should not handle with the device. The most cause of functional disorder is inappropriate handling.

Do not use chemicals or volatile liquids for cleaning. Use a clean dry cloth to wipe off the dust, or a wet soft cloth for stubborn dirt.

For transport use the original packing or designated accessory to avoid damages during the transport.

For reasons of safety unauthorized changes are forbidden.

A usage of the device which differs from usages which are described in this manual can cause damages of the device. In that case the warranty expires. Additional you should notice that every differed usage is related with dangers and can cause e.g. an electrical short, fire, electric shock or crash.

2.1. Overhead installation

Danger of life!
You have to observe the regulations of BGV C1 (formerly VBG 70) and EN60598-2-17 Installations are to carry out by skilled personnel only.

The suspension devices have to be build and measured so they can withstand for an hour the tenfold of the payload without suffering a permanent detrimental deformation.

Basically installation has to be made by using a second separate suspension. This can be e.g. a suitable net. The second suspension must be designed and attached so no part of the installation can fall down in case of failure.

During construction, reconstruction and deconstruction unnecessary stay in the range of moving areas, on lightning bridges, under elevated work stations or any other danger zones is forbidden.

The operator is obliged to following safety-related and mechanical facilities:

- Before the first start-up or after critical changes before restarting it has to be checked by an expert.
- Review in the frame of the inspection test at least all four years by an expert. .
- Review by a qualified person at least once a year.

How to carry out the overhead installation:
In tidal fall you should install the device out of the lounge area of people

IMPORTANT!
Overhead installation requires a high level of experience. This includes knowledge of calculating the payload, used installation material and safety inspections of the used material and the projector whereas the required experience is not limited to this. Do not try to carry out installation yourself under any circumstances if you are not qualified. Contact a professional installer. An inappropriate installation can lead to injuries and/or damaged properties.

It is not allowed to install the device in the grip area of people.

If the device may hang from the ceiling or from high beams, the use of truss systems is mandatory. The device may not be installed so it can swing freely in the room.

Please note: Crashing down items can cause serious injuries! Do not install the projector, if you doubt the safety of a possible installation form!

Before installation make sure that the mounting surface has the ability to carry the tenfold point load of the own weight of the device.

Mount the device with the mounting-bracket to your trussing system using an appropriate clamp.

During overhead installation the device must be always secured by a safety rope which is designed to hold the twelvefold weight of device. Only safety ropes with quick-release safety fastener elements may be used. Hang up the safety rope in the hole of the mounting bracket. Direct the rope over the truss or an appropriate fastening point. Hang up the end in the fastening element and tie up the locking nut. A safety rope once exposed to failing load or damaged may not be used furthermore.

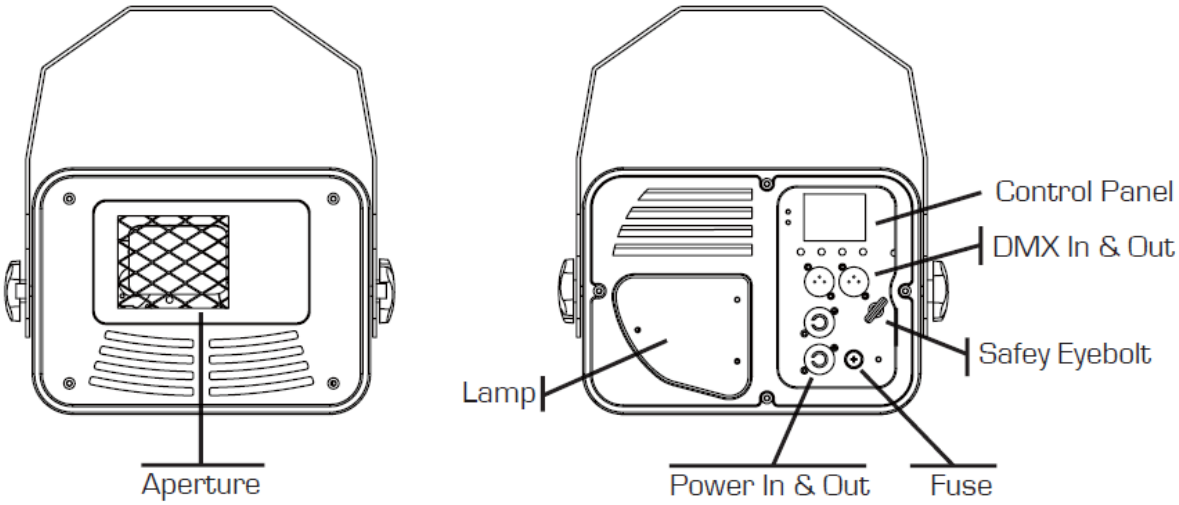
The maximum drop exceed must not exceed 20cm.

A safety rope once exposed to failing load or damaged may not be used furthermore.
Adjust the desired inclination angle via the mounting bracket and tighten the screw.

3. Introduction

Thank you for buying the **Reactor R5**. It is a powerful device.
For a successful installation and operation, please read this manual carefully.

3.1. Product overview



4. Connections

4.1. Electrical connections

If you wish to change the power supply settings, see the chapter Appendix. Connect the fixture to the mains with the enclosed power cable and plug. The earth has to be connected.

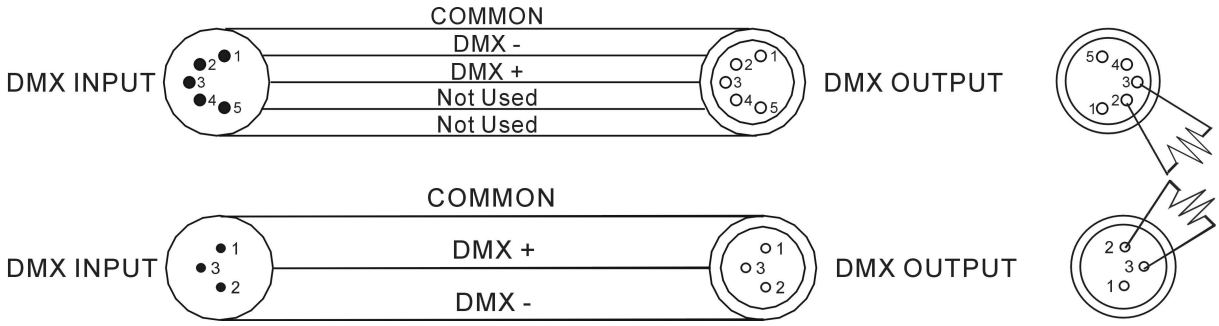
Cable (EU)	Cable (US)	Pin	International
Brown	Black	Live	L
Light blue	White	Neutral	N
Yellow/Green	Green	Earth	⏚

4.2. DMX connections

To make a DMX512 connection go ahead like it is described in the picture. Make sure that you use shielded cable. 3pole or 5pole XLR cables are suitable.
Important! After the last device the line has to be terminated. In order to do this you have to solder a 120Ω resistor between the pins Data + and Data -. You can solder this end resistor on a 3pin or 5pin XLR: Plug this adapter into the DMX output of the device.

4.3. DMX connection with terminator

Where the DMX cable has to run a long distance or the equipment is operated in an electrically noisy environment like a disco for installations, we recommend using a DMX terminator. This prevents corruption of the digital control signal by electrical noise. The DMX terminator is simply an XLR connector with a 120 Ω resistor between pins 2 and 3, which is then plugged into the XLR output socket of the last device in the series. Please look to the bottom drawings.



5. Control

To get to the main menu, press MENU. You are now in the main menu. You can select the menu items by using the UP / DOWN keys. When the function appears, you want to change, press the ENTER button. The following values can use the UP /DOWN change keys and press the ENTER key. To come up one menu level, press the MENU button again. For details on the functions you will learn in the next points of this manual.

5.1. Structure of the menu

DMX Address	001-512		Setting the DMX address
Operating Mode	DMX 15 Ch	Yes	Choosing one DMX mode.
	DMX 21 Ch	Yes	
	Auto Mode	Auto program 1-8	Choosing an automatic program.
	Sound Activation	Yes	Activating the sound-to-light mode.
	Slave	Yes	Activate the slave mode:
Advanced Setup	Pan Reverse	Yes/No	(De-)Activate the Pan reverse.
	Tilt Reverse	Yes/No	(De-)Activate the Tilt reverse.
	Display Reverse	Yes/No	The display will be reverse.
	Display shutoff time	000-060	Setting the time until the display shuts down.
	Sound sensitivity	000-100	Setting the sensitivity of the microphone.
	Calibration	Pan (-128 +127)	Calibrate the device (Password: 100)
		Tilt (-128 +127)	
		Mirror (-128 +127)	
		Colour (-128 +127)	
		Gobo (-128 +127)	
		Strobe (-128 +127)	
		Prism (-128 +127)	
	Power on/Off Lamp	ON/OFF	If this function is activates the lamp will be activated by powering the device.
	DMX On/Off Lamp	ON/OFF	If this function is activated you can turn on and off the lamp via DMX.
	Manual On/Off Lamp	ON/OFF	With this function you can turn on and off the lamp manualy.
	Reset	Yes/No	Reset of all motors.
	Factory Default	Yes/No	Reset to factory defaults.

System Info	Total time		The total time of the device is shown.
	Current Mode		The time in the current mode is shown.
	Software version		The current software version is shown.
Manual control	Pan	000-255	Manual control of all functions.
	Tilt	000-255	
	X Shaking	000-255	
	Y Shaking	000-255	
	Colour	000-255	
	Gobo	000-255	
	Pattern	000-255	
	Pattern Rotation	000-255	
	Pattern Variant	000-255	
	Pattern Zoom	000-255	
	Off-Center Mirror	000-255	
	Prism	000-255	
	Prism Rotation	000-255	
	Dimmer	000-255	
	Strobe	000-255	

6. DMX chart

6.1. Modus 1 (channels)

Channel	Value from	Value to	Function
1	0	127	Pan
	128	255	Pan Shaking slow-fast
2	0	127	Tilt
	128	255	Tilt Shaking slow-fast
3			Colours
	0	4	White
	5	9	White / Colour 1
	10	14	Colour 1
	15	19	Colour 1 / Colour 2
	20	24	Colour 2
	25	29	Colour 2 / Colour 3
	30	34	Colour 3
	35	39	Colour 3 / Colour 4
	40	44	Colour 4
	45	49	Colour 4 / Colour 5
	50	54	Colour 5
	55	59	Colour 5 / Colour 6
	60	64	Colour 6
	65	69	Colour 6 / Colour 7
	70	74	Colour 7
	75	79	Colour 7 / Colour 8
	80	84	Colour 8
	85	89	Colour 8 / Colour 9
	90	94	Colour 9
	95	99	Colour 9 / Colour 10
	100	104	Colour 10
	105	109	Colour 10 / Colour 11
	110	114	Colour 11
	115	119	Colour 11 / Colour 12
	120	124	Colour 12
	125	129	Colour 12 / Colour 13
	130	134	Colour 13
	135	139	Colour 14
	140	195	Clockwise rotation Colour wheel fast-slow
	196	199	Stop
	200	255	Counter clockwise rotation Colour wheel slow-fast
4			Gobos
	0	7	Open
	8	14	Gobo 1

	15	22	Gobo 2
	23	29	Gobo 3
	30	37	Gobo 4
	38	44	Gobo 5
	45	52	Gobo 6
	53	59	Gobo 7
	60	67	Gobo 8
	68	74	Gobo 9
	75	82	Gobo 10
	83	89	Gobo 11
	90	97	Gobo 12
	98	104	Gobo 13
	105	112	Gobo 14
	113	119	Gobo 15
	120	126	Gobo 16
	127	133	Gobo 17
	134	194	Clockwise Gobo rotation fast-slow
	195	255	Counter clockwise gobo rotation slow-fast
5			Pattern Macros
	0	8	No function
	9	34	Pattern macro 1
	35	59	Pattern macro 2
	60	84	Pattern macro 3
	85	109	Pattern macro 4
	110	134	Pattern macro 5
	135	159	Pattern macro 6
	160	184	Pattern macro 7
	185	209	Pattern macro 8
	210	234	Pattern macro 9
	235	255	Pattern macro 10
6	0	9	No function
	10	125	Clockwise pattern rotation fast-slow
	126	141	No function
	142	245	Counter clockwise pattern rotation slow-fast
	246	255	No function
7	0	9	No function
	10	120	Pattern horizontal Rotation fast-slow
	121	134	No function
	135	245	Pattern vertical Rotation fast-slow
	246	255	No function
8	0	127	Pattern Zoom manual
	128	255	Pattern Zoom slow-fast

9	0	63	Beam Rotation 0-360°
	64	127	Beam Shaking
	128	189	Clockwise beam rotation fast-slow
	190	193	Stop
	194	255	Counter-clockwise beam rotation slow-fast
10	0	7	No function
	8	255	Prism
11	0	9	No function
	10	129	Clockwise prism rotation fast-slow
	130	134	Stop
	135	255	Counter clockwise prism rotation slow-fast
12	0	255	Focus
13	0	9	No function
	10	250	Strobe slow-fast
	251	255	No function
14	0	255	Dimmer 0-100%
15			Functions
	0	39	No function
	40	59	Lamp on (6s)
	60	79	Lamp off (6s)
	80	199	No function
	200	209	Reset (6s)
	210	255	No function

6.2. Mode 2 (21 channels)

Channel	Value from	Value to	Function
1	0	255	Pan
2	0	255	Pan fine
3	0	255	Tilt
4	0	255	Tilt fine
5	0	255	Pan Shaking slow-fast
6	0	255	Pan Shaking fast-slow
7			Colours
	0	4	White
	5	9	White / Colour 1
	10	14	Colour 1
	15	19	Colour 1 / Colour 2
	20	24	Colour 2
	25	29	Colour 2 / Colour 3
	30	34	Colour 3
	35	39	Colour 3 / Colour 4
	40	44	Colour 4

	45	49	Colour 4 / Colour 5
	50	54	Colour 5
	55	59	Colour 5 / Colour 6
	60	64	Colour 6
	65	69	Colour 6 / Colour 7
	70	74	Colour 7
	75	79	Colour 7 / Colour 8
	80	84	Colour 8
	85	89	Colour 8 / Colour 9
	90	94	Colour 9
	95	99	Colour 9 / Colour 10
	100	104	Colour 10
	105	109	Colour 10 / Colour 11
	110	114	Colour 11
	115	119	Colour 11 / Colour 12
	120	124	Colour 12
	125	129	Colour 12 / Colour 13
	130	134	Colour 13
	135	139	Colour 14
	140	195	Clockwise rotation Colour wheel fast-slow
	196	199	Stop
	200	255	Counter clockwise rotation Colour wheel slow-fast
8			Gobos
	0	7	Open
	8	14	Gobo 1
	15	22	Gobo 2
	23	29	Gobo 3
	30	37	Gobo 4
	38	44	Gobo 5
	45	52	Gobo 6
	53	59	Gobo 7
	60	67	Gobo 8
	68	74	Gobo 9
	75	82	Gobo 10
	83	89	Gobo 11
	90	97	Gobo 12
	98	104	Gobo 13
	105	112	Gobo 14
	113	119	Gobo 15
	120	126	Gobo 16
	127	133	Gobo 17
	134	194	Clockwise Gobo rotation fast-slow
	195	255	Counter clockwise gobo rotation

			slow-fast
9			Pattern Macros
	0	8	No function
	9	34	Pattern macro 1
	35	59	Pattern macro 2
	60	84	Pattern macro 3
	85	109	Pattern macro 4
	110	134	Pattern macro 5
	135	159	Pattern macro 6
	160	184	Pattern macro 7
	185	209	Pattern macro 8
	210	234	Pattern macro 9
	235	255	Pattern macro 10
10	0	9	No function
	10	125	Clockwise pattern rotation fast-slow
	126	141	No function
	142	245	Counter clockwise pattern rotation slow-fast
	246	255	No function
11	0	9	No function
	10	120	Pattern horizontal Rotation fast-slow
	121	134	No function
	135	245	Pattern vertical Rotation fast-slow
	246	255	No function
12	0	127	Pattern Zoom manual
	128	255	Pattern Zoom slow-fast
13	0	63	Beam Rotation 0-360°
	64	127	Beam Shaking
	128	189	Clockwise beam rotation fast-slow
	190	193	Stop
	194	255	Counter-clockwise beam rotation slow-fast
14	0	7	No function
	8	255	Prism
15	0	9	No function
	10	129	Clockwise prism rotation fast-slow
	130	134	Stop
	135	255	Counter clockwise prism rotation slow-fast
16	0	255	Focus
17	0	9	No function
	10	250	Strobe slow-fast
	251	255	No function

18	0	255	Dimmer 0-100%
19			Functions
	0	39	No function
	40	59	Lamp on (6s)
	60	79	Lamp off (6s)
	80	199	No function
	200	209	Reset (6s)
	210	255	No function
20	0	255	Pan movement range wide-narrow
21	0	255	Tilt movement range wide-narrow

7. Technical data

Power supply	
Voltage	100-230 V / 50-60 Hz
Power consumption max.	350 W
Light source	
LM type	Philips R5
Optics	
Effect	Beam scanner laser simulation
Connections	
Current in	P-Con
Current out	P-Con
XLR in/out	XLR 3pol
Functions	
Colours	Colour wheel (14 Colour)
Gobo wheel	17x static
Prism	3x
Controlling	
Sound-to-Light	Yes
Automatic	Yes
Master-Slave	Yes
DMX512	Yes
Number of DMX channels	15/21
Hardware	
Dimensions (L/B/H)	350 x 280 x 340 mm
Weight	9,8 kg

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